

<b>Study program / course: : Mechanical Engineering</b>			
<b>Type and level of study: Master academic studies</b>			
<b>Course: Examination of machine constructions</b>			
<b>Lecturers: Josifović D. Danica</b>			
<b>Status of course: Optional</b>			
<b>Number of ECTS: 6</b>			
<b>Precondition:</b>			
<b>The objective of course</b> The course gives basic knowledge about measuring and examination of machine systems, introduces students to the application of modern methods of examination, measuring equipment and installation, and the basics of technical diagnostics.			
<b>The outcome of course</b> The knowledge which the student gains by passing this course enables him/her to diagnose independently machine systems, measuring and examination, as well as making reports about examining a machine part or a system. Using computer in measuring process.			
<b>Syllabus</b>			
<b>Theoretical study</b> Methodology of examination of machine systems. Basic statistical methods of processing measuring results. Transducers and their use. Optical, ultrasonic, X – ray method and magnetic method of examination. Methods of technical diagnostics Measuring of basic drive characteristics of machine system. Examination of work characteristics and durability of certain machine parts and systems. Examination of power transmitter, shaft, gear, clutches, bearing and other elements of machine system. Examination of ecological characteristics of machine systems.			
<b>Practical Studies:</b> Auditory exercises include the application of statistical methods in processing the measuring results. Laboratory exercises are conducted in laboratories with direct engagement of students in measuring and examination with the use of modern measuring technique. The report on examination is an integral part of laboratory exercises. Study research work is conducted through seminar papers on the basis of practical examination.			
<b>Recommended reading</b>			
1. D. Josifović: <i>Examinations of mechanical construction I</i> , Faculty of Mechanical Engineering in Kragujevac, 2000.			
2. D. Josifović: <i>Examinations of mechanical construction II</i> , book in preparing			
The number of hours of active teaching:			Other classes:
Theory: 2	Practical classes: 1.6	Other forms of teaching: 0.4	Research study: 0
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<b>Methods of teaching</b> The course consists of lectures, auditory exercises, laboratory exercises and students' independent research work.			
<b>Evaluation of knowledge</b>			
<b>Pre-final exam obligations</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Activities during the classes:	<b>5</b>	written or oral	<b>30</b>
Practical classes:	<b>10</b>		
Colloquiums(s) :	<b>40</b>		
Seminar(s) :	<b>15</b>		